



APPENDIX F

MAINTENANCE AND LONG-TERM MANAGEMENT PLANS



LONG-TERM MANAGEMENT PLAN

1.	Introduction	2
	A. Purpose of Establishment	2
	B. Purpose of this Long-term Management Plan	2
	C. Long-Term Steward and Responsibilities	2
	D. Eminent Domain	2
2.	Property Description	3
	A. Setting and Location	3
	B. History and Land Use	3
	C. Cultural Resources	3
	D. Hydrology and Topography	3
	E. Soils	4
	F. Existing Easements	4
	G. Adjacent Land Uses	4
3.	Habitat and Species Descriptions	4
	A. Baseline Description of Biological Resources on Site	4
	B. Summary of Site Development Plan	4
	C. Endangered and Threatened Species	4
	D. Rare Species and Species of Special Concern	4
4.	Management and Monitoring	5
	A. Biological Resources	5
	Element A. 1 Waters of the U.S., including wetlands.....	5
	Element A. 2 Threatened/Endangered Plant Species Monitoring (<i>if applicable</i>).....	6
	Element A. 3 Threatened/Endangered Animal Species Monitoring (<i>if applicable</i>).....	6
	Element A. 4 Invasive Species.....	7
	Element A. 5 Vegetation Management.....	7
	B. Security, Safety, and Public Access	8
	Element B.1 Trash and trespass.....	8
	Element B.2 Fire Hazard Reduction.....	8
	C. Infrastructure and Facilities	8
	Element C.1 Fences, Gates, Signage, Crossings, and Property Boundaries.....	8
	Element C.2 Berms, Structures, and Roads.....	9
	D. Reporting and Administration	9
	Element D. 1 Annual Report.....	9
5.	Transfer, Replacement, Amendments, and Notices	10
	A. Transfer	10
	B. Replacement	10
	C. Amendments	10
	D. Notices	11
6.	Funding and Task Prioritization	11
	A. Funding	11
	B. Task Prioritization	11
	C. Enforcement	12
	Signatures	13





1. Introduction

A. Purpose of Establishment

The Eccleston Mitigation Project (Site) was established to compensate for unavoidable impacts to, and to conserve and to protect, waters of the U.S. The site property includes 37.76 acres of waters of the U.S. including 5.71 acres of preserved wetlands, 3.32 acres of enhanced wetlands, 3.75 acres of created or restored wetlands, 9.30 acres of out-of-kind stream mitigation, 8,377 feet of restored stream channel, 1,457 feet of preserved stream channel, 22.82 acres of enhanced buffer, and 15.59 acres of preserved buffer. The Baltimore District of the U.S. Army Corps of Engineers and the Maryland Department of the Environment (MDE) constitute the regulatory agencies with authority over this mitigation site, and will be consulted concerning site adjustments. Terms used in this management plan have the same meaning as defined in the Compensatory Mitigation Plan (CMP).

B. Purpose of this Long-term Management Plan

The purpose of this long-term management plan is to ensure the Site is managed, monitored, and maintained in perpetuity. This management plan establishes objectives, priorities and tasks to monitor, manage, maintain and report on the waters of the U.S., covered species and covered habitat on the Site. This management plan is a binding and enforceable instrument, implemented in accordance with the CMP and the real estate protection instrument (conservation easement or declaration of restrictions) covering the Site property.

C. Long-Term Steward and Responsibilities

The Long-Term Steward is North American Land Trust. The Long-Term Steward, and subsequent Long-Term Stewards upon transfer, shall implement this long-term management plan, managing and monitoring the site property in perpetuity to preserve its habitat and conservation values in accordance with the Site's plan and conservation easement and/or declaration of restrictions, and the long-term management plan. Long-term management tasks shall be funded through the Long-Term Management Fund. The Long-Term Steward must maintain a copy of the final plan including all deed restrictions and easements. The Long-Term Steward shall be responsible for providing an annual report to the regulatory agencies detailing the time period covered, an itemized account of the management tasks and total amount expended. Any subsequent grading, or alteration of the site's hydrology and/or topography by the Long-Term Steward or its representatives must be approved by the regulatory agencies and the necessary permits, such as a Section 404 permit and/or Maryland Nontidal Wetlands Permit, must be obtained if required.

D. Eminent Domain

If the site is taken in whole or in part through eminent domain, the Long-Term Steward shall use all monies received as compensation for lands and all associated services and values taken to provide replacement compensation within the same service area, subject to regulatory agency approval. The agencies shall have the right to participate in any



proceeding associated with the determination of the amount of such compensation. Replacement compensation may be determined in consultation with the regulatory agencies.

2. Property Description

A. Setting and Location

The Site is located at the southwest corner of Park Heights Avenue and Greenspring Valley Road in Baltimore County, in the State of Maryland, designated as Parcel No. 154. The Property is shown on the Vicinity and Location Map (Exhibit A) of the Mitigation Site. Exhibit A shows the Site location in relation to cities, towns, or major roads, and other distinguishable landmarks. The Site easement plat is included as **Appendix A** to this plan.

B. History and Land Use

Publicly available historic aerials have been researched for this project site, including 1927 and 1953 photography. Previous land use for the site was high-density agricultural, with dairy cows and livestock grazing. Agriculture has shifted to grain farming with no livestock component. Current surrounding land uses include agricultural and low-density residential. The project site and uses are well-depicted in these data and demonstrate that the Jones Falls was straightened multiple times and was almost completely deforested approximately 60 years ago. Other evidence of drain tile, wetland drainage, dams, stream diversion and piping, and construction activities is noted in these photographs. Grazing and land clearing are evident in these aerials, supporting the documentation that the site was used for a dairy operation.

C. Cultural Resources

No known protected historic, archaeological, or cultural resources are present on the site within the proposed work areas. Per standard protocols, if the discovery of resources on the site is made, MDE/MHT will immediately be contacted. No additional studies are proposed at this time.

D. Hydrology and Topography

Investigation of the site has shown that the lowland floodplain areas of the site were most likely Piedmont emergent/scrub shrub/forested mosaic wetlands highly connected to a basal gravel layer within the valley. A buried hydric soil layer is present, indicating persistent groundwater at that location. This was the dominant, climax hydrological surface/groundwater regime until European settlement, deforestation, and impoundment of Jones Falls. Groundwater historically would have been at or near the ground surface, and is impacted now by channel straightening, legacy sediment, and drain tile, resulting in sporadic wetland conditions adjacent to the stream. Groundwater has been characterized through observation of redoximorphic features observed during the basal gravel investigation. Basal gravel at the site along with the buried hydric soil layer above it is known to be in the ground water table seasonal range based on soil indicators. Streams classify as perennial B4 or C4 Rosgen streams.



E. Soils

Existing soils on the site and specific to the Site include MmA, QM, and WhA. MmA (Merrimac fine sandy loam) has slopes of 0 to 3 percent and is commonly found in major stream valleys.

F. Existing Easements

Current zoning of the property and proposed Site lands is RC-2. Surrounding lands of the proposed Site are also zoned RC-2. A title report was obtained, and additional title research has been conducted for the property revealing that no encumbrances, liens, or easements noted affect the Site. The edges of the property contact road, utility, and railroad right of ways that will not impact or affect the proposed Site. No known mortgages, liens, rights-of-ways, servitudes, easements, mineral rights, etc., other than those previously stated, are known on the property.

G. Adjacent Land Uses

Current surrounding land uses include agricultural and low density residential. Though previous agricultural usage included dairy cows and livestock grazing, current agriculture is strictly grain farming.

3. Habitat and Species Descriptions

A. Baseline Description of Biological Resources on Site

The Rapid Bioassessment Protocol was used to assess the baseline for each stream resource. MBSS Protocols have also been conducted to assess the baseline for macroinvertebrates and fish species within the project limits.

Existing site wetlands functions and values have been assessed using New England Highway methodology.

Baseline invasive plant species and cover percentages have been assessed and documented at the site.

B. Summary of Site Development Plan

Mitigation Credit Map and/or As-built drawings are included as Appendix B to this plan.

C. Endangered and Threatened Species

There are no State or Federally Endangered or Threatened Species that currently exist on the Site; however, any species that may eventually occupy the site will be identified and documented on a yearly basis. Elements A.2 and A.3 below may need to be updated should a new species be identified on the site after construction/during the post-construction monitoring period.

D. Rare Species and Species of Special Concern



There are no State or Federally Rare or Species of Special Concern that currently exist on the Site; however, any species that may eventually occupy the site will be identified and documented on a yearly basis. Elements A.2 and A.3 below may need to be updated should a new species be identified on the site after construction/during the post-construction monitoring period.

4. Management and Monitoring

The overall goal of long-term management is to foster the long-term viability of the site's waters of the U.S., and any listed species/habitat. Routine monitoring and minor maintenance tasks are intended to assure the viability of the site in perpetuity.

A. Biological Resources

The approach to the long-term management of the site's biological resources is to conduct annual site examinations and monitoring of selected characteristics to determine stability and ongoing trends of the preserved, restored, enhancement, and created waters of the U.S., including wetlands and streams. Annual monitoring will assess the Site's condition, degree of erosion, establishment of invasive or non-native species, water quality, fire hazard, and/or other aspects that may warrant management actions. While it is not anticipated that major management actions will be needed, an objective of this long-term management plan is to conduct monitoring to identify any issues that arise and using adaptive management to determine what actions might be appropriate. Those chosen to accomplish monitoring responsibilities will have the knowledge, training, and experience to accomplish monitoring responsibilities.

Adaptive management means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the regulatory agencies in discussion with the Long-Term Steward. Adaptive management includes those activities necessary to address the effects of climate change, fire, flood, or other natural events. Before considering any adaptive management changes to the long-term management plan, the regulatory agencies will consider whether such actions will help ensure the continued viability of Site's biological resources.

The Long-Term Steward for the site shall implement the following:

Element A. 1 Waters of the U.S., including wetlands

Objective: Monitor, conserve and maintain the site's waters of the U.S., including wetlands and streams. Limit any impacts to waters of the U.S. from vehicular travel or other adverse impacts.

Task: At least one annual walk-through survey will be conducted to qualitatively monitor the general condition of these habitats. General topographic conditions, hydrology, general vegetation cover and composition, invasive species, and erosion will be noted, evaluated, and mapped during a site examination. Notes to be made will include observations of species encountered, water quality, general extent of



wetlands and streams, and any occurrences of erosion, structure failure, or invasive or non-native species establishment.

Task: Establish reference sites for photographs and prepare a site map showing the reference sites for the Site file. Alternatively, utilize photographic reference sites, if any, developed during the active and interim site management period. Reference photographs will be taken of the overall site at least every five years from the beginning of the long-term management, with selected reference photos taken on the ground more frequently, one time per year (*if applicable*).

Special attention should be paid to any area adjacent to or draining from non-site lands. Streams and wetlands should be observed near site boundaries to observe if increased sediment deposition has occurred. The report should provide a discussion of any recent changes in the watershed (i.e., subdivision being developed upstream of stream site).

Element A. 2 Threatened/Endangered Plant Species Monitoring (*if applicable*)

Objective: Monitor population status and trends.

Objective: Manage to maintain habitat for *Not Applicable (N/A)*

Task: Monitor status every year by conducting population assessment surveys. The annual survey dates will be selected during the appropriate period as identified by the regulatory agencies and will generally occur from N/A through N/A each year. Occupied habitat will be mapped and numbered to allow repeatable data collection over subsequent survey years. Abundance will be assessed semi-quantitatively using broad abundance categories, i.e., 0, 1 - 100, 101 - 500, 501 - 1,000, and >1,000 plants.

Task: Visually observe for changes to occupied habitat, such as changed hydrology or vegetation composition. Record any observed changes. Size of population (1 acre, etc).

Task: Implement other tasks that enhance or monitor habitat characteristics N/A.

Element A. 3 Threatened/Endangered Animal Species Monitoring (*if applicable*)

Objective: Monitor population status and trends.

Objective: Manage to maintain habitat for N/A.

Task: Monitor status every year by conducting population assessment surveys. [*The annual survey dates will be selected during the appropriate period each year.*]

Task: Implement other tasks that enhance or monitor habitat characteristics for N/A.



Element A. 4 Invasive Species

Invasive species threaten the diversity or abundance of native species through competition for resources, predation, parasitism, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to the invaded habitat.

Objective: Monitor and maintain control over invasive species that diminish site quality for which the site was established. The Long-Term Steward shall consult the Maryland Department of Natural Resources at dnr.maryland.gov for guidance on what species may threaten the site and on management of those species.

Task: Mapping of invasive species cover or presence shall occur before the site is constructed to establish a baseline. During the active monitoring period, performance standards include an invasive species cover component. Maps and other data will be available that will detail where invasive species presently occur. If a map is not available, mapping shall be accomplished through use of available technologies, such as GIS and aerial photography.

Task: Each year's annual walk-through survey (or a supplemental survey) will include a qualitative assessment (e.g. visual estimate of cover) of invasive species. Additional actions to control invasive species will be evaluated and prioritized in coordination with the regulatory agencies

Attached to this plan are fact sheets (including identification aid) for all invasive/non-native species known to be present on the site (Appendix C).

Element A. 5 Vegetation Management

Objective: Analyze effects of any authorized silvicultural manipulations on the wetland, streams, and buffers on the site. If determined appropriate, develop and implement specific silvicultural manipulations (e.g. selective thinning) in coordination with the regulatory agencies. (Site specific targets for vegetation may be specified here and task revised or added to achieve those targets.)

Objective: Adaptively manage vegetation based on site conditions and data acquired through monitoring to maintain biological values.

Task: Review and explore potential vegetation management regimes as proposals and/or opportunities and funding arise. If determined to potentially maintain site quality, develop specific silvicultural practices, amend this long-term management plan with the agencies' approval to reflect those practices, and implement silvicultural actions as funding allows.

Task: Implement vegetation management techniques, if determined beneficial and as funding allows, to allow development of vegetation as identified in the CMP. Implementation of vegetation management techniques must be approved by the regulatory agencies.



B. Security, Safety, and Public Access

The Site will be fenced or appropriately marked and shall have no general public access, nor any regular public use. Research and/or other educational programs or efforts, hunting, fishing, birdwatching and passive recreational activities may be allowed on the site as deemed appropriate by the regulatory agencies, but are not specifically funded or a part of this long-term management plan.

Potential mosquito abatement issues will be addressed through the development of a plan by the Long-Term Steward and any local mosquito control district or local health department in coordination with and approved by the regulatory agencies.

Potential wildfire fuels will be reduced as needed where approved by the regulatory agencies.

Element B.1 Trash and trespass

Objective: Monitor sources of trash and trespass.

Objective: Collect and remove trash, repair vandalized structures, and rectify trespass impacts.

Task: During each site visit, record occurrences of trash and/or trespass. Record type, location, and management mitigation recommendations to avoid, minimize, or rectify a trash and/or trespass impact.

Task: At least once yearly collect and remove as much trash as possible and repair and rectify vandalism and trespass impacts.

Element B.2 Fire Hazard Reduction

Objective: Maintain the site as required for fire control while limiting impacts to biological values.

Task: Reduce vegetation in any areas recommended by authorities, and as approved by the agencies, for fire control.

C. Infrastructure and Facilities

[Fence and gate maintenance and repair frequency will be dependent on trespass and access control issues, as well as whether grazing is utilized as a vegetation management technique and to what extent.]

Element C.1 Fences, Gates, Signage, Crossings, and Property Boundaries

Objective: Monitor condition of fences, gates, signage, crossings, and property boundaries.

Objective: Maintain fences, gates, signage, crossings and property boundaries to



prevent casual trespass, allow necessary access, and [if applicable: facilitate management.]

Task: During each site visit, record condition of fences, gates, signs, crossings, and property boundaries. Record location, type, and recommendations to implement repair or replacement to fence, gate, signage, crossings or property boundary markers, if applicable.

Task: Maintain fences, gates, signs, crossings, and property boundary markers as necessary by replacing posts, wire, gates, and signs. Replace fences and/or gates, as necessary, and as funding allows. Note any trespass by livestock.

Element C.2 Berms, Structures, and Roads

Objective: Monitor condition of berms, structures, and roads.

Objective: Maintain berms, structures, and roads to facilitate management and maintain conditions of wetlands and streams.

Task: During each site visit, record condition of berms, structures, and roads. Record location, type, and recommendations to implement repair or replacement to berms, structures, and roads, if applicable.

Task: Maintain berms, structures, and roads as necessary. Replace berms, structures, and roads as necessary, and as funding allows.

D. Reporting and Administration

Element D. 1 Annual Report

Objective: Provide annual report on all management tasks conducted and general site conditions to the regulatory agencies and any other appropriate parties. Each report shall include a cover page with the following information: the site name; Long-Term Steward (name, address, phone number, and email address); monitoring year; and any requested action (e.g. funding release, maintenance recommendations requiring agency approval).

Task: Prepare annual report and any other additional documentation. Include a summary. Complete and circulate to the regulatory agencies and other parties by December 31 of each year. Reports should be distributed electronically.

Task: Make recommendations with regard to (1) any enhancement measures deemed to be warranted; (2) any problems that need near-, short-, and long-term attention (e.g., weed removal, fence repair, erosion control); and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date. Provide documentation of the cost of any recommended maintenance and repairs.



5. Transfer, Replacement, Amendments, and Notices

A. Transfer

Any subsequent transfer of responsibilities under this long-term management plan to a different Long-Term Steward shall be requested by the Long-Term Steward in writing to the regulatory agencies, shall require written approval by the agencies, and shall be incorporated into this long-term management plan by amendment.

The Long-Term Steward shall be required to ensure that any subsequent property owners (if not identified as the long-term steward) are notified of the deed restriction, conservation easement, purpose and location of the site lands, and requirement for long-term stewardship.

B. Replacement

If the Long-Term Steward fails to implement the tasks described in this long-term management plan and is notified of such failure in writing by any of the regulatory agencies, the Long-Term Steward shall have 90 days to cure such failure. If failure is not cured within 90 days, the Long-Term Steward may request a meeting with the regulatory agencies to resolve the failure. Such meeting shall occur within 30 days or a longer period if approved by the regulatory agencies. Based on the outcome of the meeting, or if no meeting is requested, the regulatory agencies may designate a replacement Long-Term Steward in writing by amendment of this long-term management plan. If the Long-Term Steward fails to designate a replacement Long-Term Steward, then such public or private land or resource management organization acceptable to and as directed by the regulatory agencies may enter onto the Site property in order to fulfill the purposes of this long-term management plan.

C. Amendments

The Long-Term Steward, property owner, and the regulatory agencies may meet and confer from time to time, upon the request of any one of them, to revise the long-term management plan to better meet management objectives and preserve the conservation values of the Site property. Any proposed changes to the long-term management plan shall be discussed with the regulatory agencies and the Long-Term Steward. Any proposed changes will be designed with input from all parties. Amendments to the long-term management plan shall be approved by the regulatory agencies in writing shall be required management components and shall be implemented by the Long-Term Steward.

If the MD DNR or United States Fish and Wildlife Service (USFWS) determine, in writing, that continued implementation of the long-term management plan would jeopardize the continued existence of a state or federally listed species, any written amendment to this long-term management plan, determined by either the MD DNR or USFWS as necessary, shall be a required management component and shall be implemented by the Long-Term Steward.



D. Notices

Any notices regarding this long-term management plan shall be directed as follows:

Long-Term Steward: **North American Land Trust**
100 Hickory Hill Road
PO Box 467
Chadds Ford, PA 19317
610-388-3670 (phone)
610-388-3673 (fax)

Property Owner: **Eccleston Land Company**
112 Castlewood Road
Baltimore, MD 21210
410-435-2664 (phone)

USACE: **U.S. Army Corps of Engineers, Baltimore District**
2 Hopkins Plaza
Baltimore, MD 21201
1-800-434-0988 (phone)

MDE: **Maryland Department of the Environment**
1800 Washington Boulevard
Baltimore, MD 21230
410-537-3000 (phone)

6. Funding and Task Prioritization

A. Funding

The Long-Term Management Fund Derivation table included with this plan summarizes the anticipated costs of long-term management for the Site. These costs include estimates of time and funding needed to conduct the basic monitoring site visits and reporting, trash removal, fence repair, etc. and a prorated calculation of funding needed to fully repair and/or replace fences and other structures every year. The total annual funding anticipated is approximately \$ 3,510.00, therefore, with the current annual estimated capitalization rate of 4% the total endowment amount (the Long-Term Management Fund) required will be \$ 87,750.00. A detailed breakdown of the cost can be found in Appendix D.

North American Land Trust shall hold the endowment principal and interest monies (the Long-Term Management Fund) as required in the CMP, which consists of monies that are paid into it in trust, and is appropriated to fulfill the purposes for which payments into it are made. These interest monies will fund the long-term management, enhancement, and monitoring activities on Site lands in a manner consistent with this long-term management plan.

B. Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new



requirements, may be necessary if insufficient funding is available to accomplish all tasks. The Long-Term Steward and the regulatory agencies shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1) required by a local, state, or federal agency; 2) tasks necessary to maintain or remediate the Site (including unauthorized impacts); and 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the regulatory agencies and as authorized by the regulatory agencies in writing.

C. Enforcement

The regulatory agencies and its authorized agents shall have the right to inspect the Property and take actions necessary to verify compliance with this Long-Term Management Plan. The Long-Term Management Plan herein shall be enforceable by any proceeding at law or in equity or administrative proceeding by the regulatory agencies. Failure by any agency (or owner) to enforce the Long-Term Management Plan contained herein shall in no event be deemed a waiver of the right to do so thereafter.

DRAFT



Signatures

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date herein below last written.

_____	_____
Long-Term Steward	Date

USACE

_____	_____
U.S. Army Corps of Engineers, Baltimore District	Date
By: _____	Its: _____

MDE

_____	_____
Maryland Department of the Environment	Date
By: _____	Its: _____

DRAFT